THURSDAY, AUGUST 22, 1878

BRITISH BARROWS

British Barrows. A Record of the Examination of Sepulchral Mounds in various Parts of England. By William Greenwell, M.A., F.S.A. Together with *Description of Figures of Skulls, General Remarks, Pre-historic Crania, and an Appendix.* By George Rolleston, M.D., F.R.S. (Oxford: Clarendon Press, 1877.)

THE pre-historic inhabitants of Europe are now exciting an interest in the minds of thoughtful men which, twenty years ago, would have seemed impossible, and which can no longer be ignored by the historian. The story of man in Great Britain is rapidly being unfolded, principally by the careful and scientific exploration of the various remains which are eloquent of the condition of things that passed away before the art of letters was known in the north; and, among those who have been mainly instrumental in bringing this about, Mr. Greenwell will ever deserve a foremost place. He has devoted years of patient labour to the accumulation of facts; and in the present work he records the results of the examination of upwards of 230 burial mounds, the greater number being in the wolds of eastern Yorkshire. He has also had the advantage of the aid of Prof. Rolleston, by whom the human remains—fortunately now safe from dispersal, in the Oxford Museum—have been classified and described, in the latter part of the book.

The general results of the exploration are thrown into an introduction of 130 pages, carefully written, and highly suggestive of new lines of thought. The barrows vary in size and shape very much as the graves and tombs in our own graveyards, where the rich man's memory is preserved by the large mausoleum, while the poor man's resting-place is marked merely by the little mound of earth, soon to be lost in the general surface. Those in the Yorkshire wolds are either circular or "long," the former being the more abundant, and are frequently surrounded by a ramp or a ditch. In some cases this was within the base of the barrow, and very generally it was incomplete. "This very remarkable feature," writes Mr. Greenwell, "in connection with the inclosing circles, is also found to occur in the case of other remains which belong to the same period and people as the barrow. The sculptured markings engraved upon rocks, and also upon stones forming the covers of urns or cists, consist in the main of two types—cup-shaped hollows, and circles, more or less in number, surrounding in most cases a central cup In almost every instance the circle is imperfect, its continuity being sometimes broken by a duct leading out from the central cup; at other times by the hollowed line of the circle stopping short when about to join at each end. The connection of the sculptured stones, if so they may be termed, with places of sepulture brings them at once into close relationship with the inclosing circles of barrows, and it is scarcely possible to imagine but that the same idea, whatever that may have been, is signified by the incomplete circle in both cases. The rings of gold and bronze, of various shapes, some of which in their construction show that the penannular form is not caused by the requirements of their use, appear to represent the same incomplete circle. In fact, if some of the gold rings were figured upon stone, they would appear in the very similitude of the circular rock sculptures." Our author suggests that it may have been intended to prevent the exit of the spirits of those buried, though in that case it is hard to see why the spirit should not have found its way out through the opening. It seems more probable that if the barrow represented the hut inhabited by the living that the circle round it would represent the trench, or the inclosure of the hut, and that this would necessarily be incomplete, to allow of access to the habitation.

The dead were buried in the barrows of the wolds very generally in the condition and clothing in which they died, the proportion of cases of inhumation to those of cremation being as 301 to 378, or about 80 per cent. In all probability both customs were carried on simultaneously, as was the case in ancient Rome, where, however, inhumation was mainly confined to the lower classes. Where inhumation had been practised the body was buried in the crouching posture in which life had departed, and which would be natural where the sleeping place was not well protected against the cold, and the covering was scanty. This interpretation, due to the ingenuity of Mr. Evans, is most likely true.

The burnt and broken bones of various animals used for food in the barrows are probably the remains of funeral feasts held at the time of the interment, or from time to time afterwards, or they may be the remains of food offered to the dead. Splinters and various manufactured implements of flint, and fragments of pottery, also occur sometimes in great abundance, and probably symbolise some religious idea. Fragments of flint were used in interments at least as late as the fourth and fifth centuries after Christ in this country; for they were found in considerable quantities inside the oaken coffins in the Romano-British cemetery, referable to the above date, explored at Hardham, Sussex, in 1866.

Where cremation was practised the funeral pile was sometimes kindled upon the spot, which was afterwards occupied by the barrow, but at other times the ashes of the dead were collected and deposited somewhere else. In several barrows curious perforated vessels of pottery, or "incense cups," were met with, which may have been used to convey the sacred fire to the pile. The ashes of the dead were placed in urns sometimes highly ornamented, and those things which delighted the dead most or were most useful to him, were deposited in the tomb. Flint scrapers, flakes, arrow-heads, beads, hammer-axes, celts, domestic pottery, and a few bronze articles. The number of objects buried in each barrow varied according to the wealth of the dead and the estimation in which he was held by the survivors.

The animal remains in these barrows prove that the ancient inhabitants of the Wolds were no rude savages living mainly on the chase. They possessed flocks and herds, consisting of well-known domestic breeds—the small Celtic shorthorn, now represented by the mountain cattle of Wales and Scotland, the pig, the horned sheep or goat, the horse and the dog, the two last being

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the rarest. They also ate venison of the stag (*Cervus elaphus*). Their place in the archæological scale of culture is fixed by the few and simple forms of bronze articles in the barrows, the simple wedge-shaped axe, and the short broad dagger, in association with various articles of stone, coupled with the absence of the higher bronze types, such as the sword. They belong to the early bronze age. The absence of the sword is also noticed in the tumuli of France, referred by Mr. Chantre to the same horizon. At this time the knowledge of bronze was gradually finding its way northwards from the Mediterranean centres, and the simpler forms preceded the more complex and elaborate.

Nor are we left in doubt as to the ethnical relations of these ancient Yorkshiremen. Prof. Rolleston's elaborate examination of the crania and skeletons reveals the fact that the two types—the small long-headed or "Iberian," and the tall robust round heads, or "Celtic," which have been traced by Thurman, Huxley, Busk, and myself, from Scotland to the Mediterranean, and from the Rhine to the Pillars of Hercules, occur in the round barrows side by side in intimate association. The former of these, "the Silurian" of Prof. Rolleston, is considered in this work as the older of the two. According to Dr. Thurman it was dormant in Britain in the Neolithic age, at the close of which it was invaded by "the Celtic" or "the Cimbric" of Prof. Rolleston. The truth of this view is confirmed by the fact that the dead of these two races rest peacefully together in the round barrows of the wolds referable to the early bronze age. In concluding this review it remains merely to say that this valuable work fills a void in the archæological record of Great Britain, and that it contains a larger mass of accurately observed facts than any book hitherto published relating to the Bronze Age in this country.

W. BOYD DAWKINS

THE ECLIPSE OF THE SUN

THE following letter appears in the *Daily News* of Tuesday, from its Special Correspondent, dated Manitou, Foot of Pike's Peak, Colorado, August 2:—

Since the eclipse I have had no easy time of it. To gain accurate information concerning the work done along the long north and south line, on which, as your readers already know, the stations were located, it was necessary to return over the crest of the Rocky Mountains at Sherman (8,200 feet) down to Cheyenne, and then go as far south, by the Colorado Central line, as Colorado springs, passing Denver on the way. Manitou, whence this letter is written, is about six miles from the latter place on the old and famous Ute trail, a road much improved in these later days for the needs of the enormous traffic connected with the mines at Leadville. The place itself is lovely—so lovely, indeed, that although it is over 2,000 miles from the eastern seaboard, the hotels and baths (iron and alkaline) formed but a nucleus for a large encampment, tents dotting the slopes in all directions. The newly-published geological map of this region with which Prof. Hayden, with his wonted generosity and forethought, had supplied some of the astronomers, enabled them to revel with more or less success in the wonders of the famous "Garden of the Gods," and Glen Eyrie, where the rocks put on everything they can in the way of uncommon arrangement and colour. Vertical beds of limestone and sandstone 300 feet high, and not many yards thick, even at the base—each spire excelling the other in some glorious colour, including all those we see in an English sunset—is a sight never to be forgotten, even if Pike's Peak, with its patches of snow, were not seen through such gigantic and weird portals.

Here, then, we met the Pike's Peak and the Las Animas parties, all rejoicing over their success. Two of the former—General Myer, the creator and chief of the wonderful meteorological signal surface, and Prof. Cleveland Abbe—have suffered somewhat from their sudden transference from the plains to a height of above 14,000 feet. The latter, indeed, had to be transferred on a litter, by the General's order, to a station at mid-height before the eclipse. But the journey to Manitou does not exhaust my wanderings. Much was expected from Prof. Holden's party at Central City, easily reached from Golden City by one of the most wonderful railways in the world. To Central City, therefore, I went up to a point called Black Hawk. The railroad is filched from the bed of a stream at the bottom of a true cañon. Here rail and river together are not fifteen yards broad, and precipitous cliffs 1,000 feet high shut out the light. Here, again, the cliffs recede, the river bed widens, and miners—American and Chinese—are engaged in extracting the precious gold from the turbid water and its bed, some of the miners making in this way 1,500 dollars a week. From Black Hawk to Central City there is no possible approach except up the side of a steep hill. The railway accepts the condition, and zigzags up—now engine, now cars, foremost—till the nest of stamping mills and smelting furnaces at Black Hawk looks like a speck below.

The party at Central City had been as fortunate as the rest in the matter of weather, and their station, on the top of Teller's Hotel, in the middle of this strange mountain community, had proved a very convenient one. After my last letter to you, I became acquainted with the fact that Mr. Burnham, so well known for his work on double stars, and whose eye seems to be keen as was formerly Dawes's among us, was going to observe the eclipse on behalf of the *Chicago Times*—a piece of newspaper enterprise worthy of imitation. I tried to find him when I passed through Denver to Prof. Young's camp, but was unsuccessful, though I was fortunate enough to see Prof. Young himself, whose party was second to none either in *personnel* or in their means at the disposal for securing good results.

My telegram to you, immediately after the eclipse, was necessarily based upon the most meagre materials, and laid emphasis upon those parts of the combined attack which were most strongly represented at the northern stations. Still, now that the complete information is before me, I have very little to alter, so singularly and exceptionally do the observations support each other in the main; and I say in the main, because on some points there is enough disaccord to make the astronomers already look forward to the next eclipse. Without going too much into detail I will go over the ground in the light obtained by personal communication with the chiefs of the different parties, with the single exception of Prof. Hall, who is a most skilful and competent observer, and to whose opinion, as the discoverer of the satellites of Mars, the greatest weight is to be attached. The corona was much less brilliant than usual. Those who have observed the greatest number of eclipses are strongest on this point. The contrast, perhaps, is most striking between this eclipse and that of 1871 observed in India. Now that this fact is recognised, the naturalness of it is apparent to everybody. We know that the sun's activity and the various meteorological and magnetical conditions on our own earth which depend upon or are connected with it wax and wane every eleven years or so. This is termed the sun-spot period. Thus the sun was very active in 1871, and it will be again very active in 1882. It is very sluggish now, and it will be sluggish again in 1889. In 1871 we had many spots, many prominences, many mag-

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